AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (*Currently Amended*) A device ~~Device~~ for compressing a list of destination addresses for ~~of~~ a multicast message, wherein each destination address in said list represents a different host, said device comprising:

means for detecting ~~to detect~~ a common prefix in at least two different destination addresses from ~~of~~ said list of destination addresses,

means for generating a suffix list for ~~to generate a sequence of suffixes of said at least two~~ destination addresses from said list of destination addresses that are detected to have a common prefix, wherein said suffix list represents the non-identical portions of said detected destination addresses, and

means for adding said suffix list ~~to add said sequence of suffixes~~ to said common prefix to thereby create a compound destination address.

2. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses.

3. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses and other compound destination addresses.

4. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said list of destination addresses comprises other compound destination addresses.

5. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said device is incorporated in a host of a communications network having connectionless multicast transmission capabilities.

6. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said device is incorporated in a router of a communications network having connectionless multicast forwarding capabilities.

7. (*Currently Amended*) A method ~~Method~~ for compressing a list of destination addresses for ~~of~~ a multicast message, wherein each destination address in said list represents a different host, said method comprises:

detecting a common prefix in at least two different destination addresses from ~~of~~ said list of destination addresses,

generating a suffix list for ~~sequence of suffixes of said at least two~~ destination addresses from said list of destination addresses that are detected to have a common prefix, wherein said suffix list represents the non-identical portions of said detected destination addresses, and

adding said suffix list ~~sequence of suffixes~~ to said common prefix to create a compound destination address.

8. (*Currently Amended*) A router ~~Router~~ of a communications network having connectionless multicast forwarding capabilities, wherein said router incorporates a device for compressing a list of destination addresses of a multicast message as defined by claim 1.

9. (*Currently Amended*) A router ~~Router~~ according to claim 8, wherein said router further comprises:

a routing table memory, and

means to address said routing table memory via a compound address having the same format as said compound destination address.

10. (*Currently Amended*) A host ~~Host~~ of a communications network having connectionless multicast transmission capabilities, wherein said host incorporates a device for compressing a list of destination addresses of a multicast message as defined by claim 1.

11. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said means for detecting ~~to detect~~ a common prefix detects octet-aligned prefixes.

12. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said means for detecting ~~to detect~~ a common prefix detects nibble-aligned prefixes.

13. (*Currently Amended*) The device ~~Device~~ for compressing according to claim 1, wherein said means for detecting ~~to detect~~ a common prefix detects bit-aligned prefixes.

14. (*Currently Amended*) The method ~~Method~~ for compressing according to claim 7, wherein detecting a common prefix further comprises detecting octet-aligned prefixes.

15. (*Currently Amended*) The method ~~Method~~ for compressing according to claim 7, wherein detecting a common prefix further comprises detecting nibble-aligned prefixes.

16. (*Currently Amended*) The method ~~Method~~ for compressing according to claim 7, wherein detecting a common prefix further comprises detecting bit-aligned prefixes.